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The Study of Preferred Learning Methodology in Students of Health Faculty in Shahrekord University of Medical Sciences

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Abstract: Learning is the process of partially stabilized changes in students' potential behavior through experience. Learning method is the logical and systematic way for presentation of learning content including methods such as: lecture, group discussion, workshop, question and response and many others. It is commonly known that people learn using different learning methods. This study was conducted in order to find the preferred learning methodology in the students of health faculty in Shahrekord University of Medical Sciences. In a descriptive analytical and cross sectional study, 140 students of health faculty in 2009 – 2010 were selected by systematic random sampling. Data was gathered by a valid and reliable questionnaire and was analyzed by SPSS software using descriptive statistics, T. test and variance analysis (P<0. 05). Of 140 students, 70.7% were female. Mean ageof the students was21.44±2.5. Males preferred brainstorming method and females lecturing method. The lecturing method was the least popular method among bachelor students (P<0. 05). Using active learning methodsfor students creates a positive attitude and increases interest because of more involvement and participation in learning. Furthermore, high level of intellectual engagement and involvement of different senses leads to an increasein deep and sustained learning.

Key words: Learning · Preferred methods · Health students · Active learning

INTRODUCTION

Every individual learns better by a particular style. Although, the university lecturers should adapt their method of teaching based on the learning styles of each student, it seems that in teaching sessions, less attention is often paid to it [1]. At the present, most of the research and also most of the hours of teaching of university lecturers are dedicated to how they should offer the learning materials in order that the maximum learning would occur [2]. The speed of change in educational systems is so drastic that sometimes it causes total change in educational structure. In the current world, nobody is exempted from learning and teaching. In fact, learning is considered as a part of human life [3]. It is no doubt true that the most important principle in human life is learning; because humans encounter varieties of learning processes from the birth until the end of their lives. In any learning process, two essential parts are involved, i.e. learner and educator. Of course, it is obvious that the educator or teacher never teach something, instead they develop conditions in which the learner learns. With the technological advances of the new age, individual and social needs have also increased. Mean while, fulfilling the educational needs of the students with the use of more complicated educational methods will be available. Thus, traditional methods of teaching no longer are able to facilitate learning in an appropriate

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manner [4]. It is no doubt that learner is a creature with unique characteristics whose educator wound not be able to intervene in the learning process without taking into account one's physical, mental, emotional and social features. The aim of learning is beyond merely conveying concepts and information to the learner. In fact, there is a dramatic difference between knowing something and learning it. Learning is an active cognitive stream of mind of learners that is affected by lots of variables. In the recent years, great volume of educational and psychological research put their focus on the role of learners and the impact of teaching and effective cognitive processes on the learning.

It is obvious that without enough familiarity with learners and one's cognitive processes, learning will not occur. During many years, cognitive psychologists strive to recognize and explain the roles of learners and the reactions occurring during learning processes [5].

The results of different research indicate that many of the learners at university levels don't have effective and stable learning. Choosing to dropout, mental and social problems resulted from this can be a threat for every society [6]. Different factors affect learning including motivation, natural feeling of needing to continue education, individual interests, conformity of teaching materials with the realities of life and so on.

In the recent years, medical education has been encountered many changes. Establishing new educational methods and their improvement and development is one of the goals of organizations involved in the educational affairs. In the teaching programs, two general teacher-oriented and student-oriented approaches can be seen. In the first approach, university lecturer is the fulcrum of student and the student is given an opportunity to think, which is itself an essential factor in learning. In this approach, learners learn the contents expressed by the university lecturer and forget them quickly. In the student-oriented approach, the attention is paid to the needs and capabilities of the learner [7]. One of the best-known influential factors of effective learning is to utilize the most appropriate compounding of the teaching (pedagogical methods). The most principal teaching methods are as follow: lecture, group discussion, educational workshops, brainstorming, team work, question and response, interview, project, symposium, panel and seminar [8]. Given to the fact that no study has been done yet about the preferred methods of learning in the Shahrekord University of Medical Sciences, this study is done in line with the management scheme of teaching quality (IEQM) in its health department. This research can contribute greatly to decision-making in teaching methodology.

MATERIALS AND METHODS

This research is a cross-sectional study of the descriptive-analytical type. The population of the research was the students of the department of health in Shahrekord University of medical sciences in the educational year of 1387-88. The given population with the assurance level of 95% was 140 individuals that were chosen by systematic random sampling. The preferred methods were measured by means of a valid and reliable questionnaire with 20questions. Data were analyzed through SPSS and by means of descriptive statistics, independent t-test, variance analysis and meaningful level of lower than p□0.05.

Inclusion criteria to this study consisted of being the student of health in Shahrekord University of medical sciences that were engaged in education in 1388. The students being health apprentice at that time were excluded from this study. The basis of the evaluation was the Likert scales (very agree, agree, indifferent, disapprove and disapprove a lot). In this questionnaire, students were asked to choose among the teaching methods including lecture, group discussion, educational workshops, brainstorming, teamwork, question and response, interview, project, symposium, panel and seminar separating theoretical and practical courses and express their attitude based on the Likert scale.

RESULTS

In this cross-sectional study of descriptive-analytical type, 140 individual of health students in health faculty were examined and evaluated through a questionnaire of preferred methodology with favorable validity and reliability (0.775 Cronbach Alfa). 32.1% of the students were males and 67.9% of them were females. The mean age of the students were 21.68+2.60 males and 21.34+2.51 females in respect and the general mean age of them were among 18 to 34 years old with mean and standard deviation of 21.44+2.53. The students were majored at family health, fight against diseases, general health and environmental health respectively with a proportion of 32.9%, 30%, 8.6% and 38.6%.in terms of educational level, 30% of the students were bachelor and 70% were associate degree. 39.3% of them were in their first semester and 60.7% of them were in their third semester.

With the completion of questionnaire, males and females' attitudes in different fields, different educational levels and educational semesters were examined. 66.7% of the males and 70.5% of the males agreed with lecture method in offering theoretical courses and 24.4% of the males and 21.1% of the females disagreed and the rest offer no attitude.46.7% of the males and 516% of the females agreed with the lecture methodology for offering practical courses and 44.4% of males and 31.6% of the females disagreed or offer no attitude.

Concerning application of group discussion method for offering theoretical courses, 80% of the males and 69.5% of females agreed with the use of educational workshop method in offering theoretical courses and only 8.9% of males and 9.5% of the females disagreed. Nevertheless, 66.7% of the males and 67.40% of females agreed with application of educational workshop methodology in offering practical courses and 6.7% of males and 9.5% of females disagreed with applying this method in learning practical courses.Assessment of attitudes of students regarding application of brainstorming methodology indicated that 84.4% of males and 77.9% of females agreed with it and only 9.5% of the students disagreed with it. Besides, the results indicated that 75.6% of the males and 66.5% of the females preferred brainstorming in the case of practical courses and 4.4% of males and 17.9% of females disagreed with this method.

In addition, 80% of males and 75.8% of females agreed with question and response methodology in theoretical courses and only 13.7 of females disagreed. Furthermore, the results demonstrated that 73.3% of males and 63.2% of females preferred question and response method in the case of practical courses and 20% of males and 22.1% of females disagreed with application of this method in the case of practical courses.

71.1% of males and 6-% of females preferred the application of project method in offering theoretical courses whereas 20% of males and 22.1% of females disagreed and 46.7% of males and 66.3% of females agreed with the application of this method in the case of practical courses and 17.9% of females disagreed and others had no attitude. The results illustrated that 60% of males and 54.7% of females preferred symposium method in offering theoretical courses and 20% of males and 25.3% of femalesdisagreed with this method. Meanwhile, 46.7% of males and 35.8% of females agreed in the applying this method and 15.6% of males and 25.3% of females disagreed.68.9% ofmales and 68.4% of female sagreed to apply theoretical courses and 57.8% of males and 48.4% of females with the application of this method in offering practical courses. In contrast, 22.2% of males and 15.8% of females and 26.7% of males and 20% of females respectively disagreed in the application of this method in offering both theoretical and practical courses.

The results derived from the questionnaire indicated that 68.9% of males and 64.2% of females preferred the application of seminar in the case of theoretical courses and 8.9% of males and 17.9% of females disagreed. In addition, 48.9% of males and 65.3% of females agreed with the application of this method in the case of practical courses and 28.9% of the males and 14.7% of the females disagreed with this method.

77.8% of males and 71.6% of females preferred the use of dialogue in learning theoretical courses and 55.6% of males and 75.8% of females preferred this method in learning practical courses. Respectively, 17.8% of the males and 12.6% of females and 17.8% of the males and 9.5% of the females disagreed with the application of this method in learning theoretical and practical courses.

The results of the study indicated that there was a significant relationship in determining preferred methods of teaching between males and females regarding to the gender, educational level, field of study and semester only in the following cases. Using T. student test for the scores of educational methodology, the males preferred more brainstorming and the females preferred lecture.

There was a minor significant difference in offering courses in practical and theoretical brainstorming (p□0.05) and the females preferred less the application of this method in the case of theoretical courses. Similarly, there was a meaningful difference in teaching materials in question and response method in a way that the males preferred more than females the application of this method in learning theoretical courses.

Besides, there was a remarkable difference between males and females regarding to the educational workshop method (p□0.05). The mean and standard deviation of their scores was 2.94+1.50+4.29+.787 and the mean of scores of the males were lower than that of the females. In other educational methods,no significant difference was observed. The students of bachelor degree prefer fewer lecturesin comparison to the other methods. In other educational methods, no meaningful difference was observed (P□0.05).

The administration of T. student test for the scores of preferred educational methods regarding to the semester indicated that in the cases of the application of symposium and seminar methods for the practical courses and dialogue method for theoretical and practical courses, there was a significant difference between first

and third semester students. In all cases, students of the first semester gave more scores to the aforementioned methods in comparison to the students of the third semester.

Variance analysis of the score of the teaching methods regarding to the field of study indicated that the students of environmental health preferred more the application of the lecture in the case of practical courses. On the other hand, the students of family health preferred most applying educational workshop in the case of theoretical courses. Furthermore, the students of environmental health prefer the symposium method in the cases of practical courses in comparison to other methods. The students of fight against diseases preferred the application of panel method in the case of practical courses. They preferred less seminar method for practical courses and a significant difference was observed (P□0.05).

In other educational methods, no significant difference was observed regarding to the fields of study. In addition, Pearson correlation coefficienttest showed that there was a linear correlation between age and the application of project in the case of the practical courses (r-0.24, p-0.004) but there was no difference between age and application of other methods.

DISCUSSION

The preferred methods of active learning and teaching are new approaches in education. The application of these methods, besides using high level of intellect and different senses causes increase in depth and stability of the learning in learners. The findings of this study suggest that the university lecturers should adapt themselves with better learning methods. From gender point of view, the preferred methodology of learning, males prefer more the brainstorming in comparison to females. Malesprefer the application of educational workshops and the question and response methodologies in the case of theoretical courses and the dialogue methods in the case of practical courses. There was no significant difference based on the p value. But in other methods, no significant difference was observed. Both genders were similarly selected the application of active teaching method in the following order: the brainstorming 77.9% and 84.4%, the question and response 75.8% and 80%, the educational workshop method 69.5% and 80%,the group discussion method 80% and 80%, the project method 60% and 71.1%, the symposium method in theoretical courses 54.7% and 60%, the dialogue method 71.6% and 77.8%, the seminar method 64.2% and 68.9%. The results were consistent with the findings derived from researches on nursing students (Safari and Yazdanpanah) [9] and they also were in consistencewith a study in Denmark using the dialogue and the question and response methods [10].

Analyzing data indicates that the students of bachelor degree prefer less the lecture method than other methods. The difference in this case was significant but in other methods, no meaningful difference was observed regarding to the educational level in preferring one method. In a study done in Yazd about the effects of active learning method on the rate of satisfaction and retention of information, it was proved that students preferred other methods [11] and the students of associate degree preferred more the brainstorming method in practical courses and the difference was significant. Also, Amir *et al*. [12] in a study showed that university students of different majors will opt different learning styles. In another study carried out in Malaysia, the preferred learning methods of the students were examined and the traditional learning methods were criticized. The results of this study indicated that "students need encouragement and support from teachers to develop their metacognitive skills" [13]. The results of our study showed that the students of the first semester prefer more than the students of the third semester the application of the symposium, the seminar andthe dialogue methods in the case of practical courses and the difference was statistically meaningful (p□0.05). In this case, there was no evidence of the previous studies.

The results of the study illustrated that variance analysis of the scores of the teaching methods regarding to the field of study represents that the students of environmental health prefer the application of lecture and symposium in the practical courses. The students of family health prefer the application of educational workshop in the theoretical courses and the students of fight against the diseases prefer the panel methodology in the case of practical courses. There was a significant difference (p□0.05) and in other courses, the difference was not meaningful in selecting the preferred teaching methodology. In this case, there was no evidence of the previous studies.

The results of the study showed that there was a significant linear correlation between age and the application of project methods in the case of the practical courses (r-0.24, p-0.004) but there was no liner correlation between age and the application of other methods. In this case, there was no evidence of the previous studies.

Table 1: The table indicates the frequency distribution of the students attitudes regarding the preferred methodology of teaching and the p value of their attitudes based on their gender and theoretical and practical courses

		Agreed		Indifferent		Disagreed		
Teaching methods	Gender	Percent	Frequency	Percent	Frequency	Percent	Frequency	P Value
Application of lecture in theoretical courses	Male	7.66%	30	9.8%	4	4.24%	11	89.0
	Female	5.70%	67	4.8%	8	1.21%	20	
Application of lecture in theoretical courses	Male	7.46%	21	9.8%	4	4.44%	20	233.0
	Female	6.51%	49	8.16%	16	6.31%	30	
Application of lecture in practical courses	Male	80%	36	20%	9	0	0	11.0
	Female	80%	76	6.12%	12	4.7%	7	
Application of group discussion in theoretical courses	Male	80%	36	3.13%	6	7.6%	3	583.0
	Female	6.72%	69	8.15%	15	6.11%	11	
Application of group discussion in practical courses	Male	80%	36	1.11%	5	9.8%	4	339.0
	Female	5.69%	66	1.21%	20	5.9%	9	
Application of workshop in theoretical courses	Male	7.66%	30	7.26%	12	7.6%	3	803.0
	Female	4.67%	64	2.23%	22	5.9%	9	
Application of workshop in practical courses	Male	4.84%	38	6.15%	7	0	0	099.0
	Female	9.77%	74	6.12%	12	5.9%	9	
Application of brainstorming in theoretical courses	Male	6.75%	34	20%	9	4.4%	2	069.0
	Female	5.69%	66	6.12%	12	9.17%	17	
Application of brainstorming in practical courses	Male	80%	36	20%	9	0	0	016.0
	Female	8.75%	72	5.10%	10	7.13%	13	
Application of question and response in theoretical courses	Male	3.73%	33	8.17%	8	9.8%	4	141.0
	Female	2.63%	60	9.18%	18	9.17%	17	
Application of question and response in practical courses	Male	1.71%	32	9.8%	4	20%	9	315.0
	Female	60 %	57	9.17%	17	1.22%	21	
Application of project in theoretical courses	Male	7.46%	21	9.28%	13	4.24%	11	073.0
	Female	3.66%	63	8.15%	15	9.17%	17	
Application of project in practical courses	Male	60%	27	20%	9	20%	9	775.0
	Female	7.54%	52	20%	19	3.25%	24	
Application of symposium in theoretical courses	Male	7.46%	21	8.37%	17	6.15%	7	328.0
	Female	8.35%	34	9.38%	37	3.25%	24	
Application of symposium in practical courses	Male	9.68%	31	9.8%	4	2.22%	10	411.0
	Female	4.68%	65	8.15%	15	8.15%	15	
Application of panel in theoretical courses	Male	8.57%	26	6.15%	7	7.26%	12	129.0
	Female	4.48%	46	6.31%	30	20%	19	
Application of panel in practical courses	Male	9.68%	31	2.22%	10	9.8%	4	359.0
	Female	2.64%	61	9.17%	17	9.17%	17	
Application of seminar in theoretical courses	Male	9.48%	22	2.22%	10	9.28%	13	1.0
	Female	3.65%	62	20%	19	7.14%	14	
Application of seminar in practical courses	Male	8.77%	35	4.4%	2	8.17%	8	138.0
	Female	6.71%	68	8.15%	15	6.12%	12	
Application of dialogue in theoretical courses	Male	6.55%	25	7.26%	12	8.17%	8	053.0
	Female	8.75%	72	7.14%	14	5.9%	9	

CONCLUSION

The application of active teaching and learning methods causes developing positive attitude and attract interests of students due to activate more the presence of students and their participation. Besides, engaging their thoughts and senses more after the educational sessions leads to increase information depth and stability. New learning methods can contribute more effective learning in the students and increase their capabilities in different areas. Furthermore, the finding of the present study would encourage the university lecturer in selecting much more modern pedagogical methodologies. Owning o the fact that the teaching strategies are of the great importance and given to the need for innovation in teaching, similar researches should be done in other faculties and fields of studies. In addition, in other studies, university lecturers' attitudes should be taken into account, because university lecturer should adapt themselves with better learning methodologies of the learners and catching their attention cause to select an appropriate method of teaching.

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REFERENCES

1. Anthony, F. Grasha and R.H. Sheryl, 1996. Learning Style Survey, Ohio: University of Cincinnati.
2. Khadivzadeh, KH., 2002. Study and learning methods of midwifery students of Mashhad, Asrar Journal, 2002, Ninth Year. (Text in Persian).
3. Seif, A., 2003. Assessment and measurement of evaluation, TehranUniversity, Tehran, (Text in Persian).
4. Shaabani, H., 2001. Principles of teaching, Tehran University, Tehran, (Text in Persian).
5. Ayers, M.S. and L.M.A. Reder, 1998. Theoretical review of the misinformation effect: prediction from an activation – based memory model. Psychologic Bulletin Review.
6. Johnson, M.K., E.C. Yap and P.M. Rose, 1989. Frequency judgments: the problem of defining a perceptual event. J. Exp. Psychol. Learn Mem. Cogn.
7. Mehdizadeh, M., F. Kermanian, S.H. Irvani, N. Markazimoghadam and S.H. Shayan, 2007. Comparing two methods of lecturing and problem solving based learning in teaching anatomy to first year medical students, Iranian Teaching in medical science journal, Autumn and winter of, (2)7. (Text in Persian).
8. Lefrancis, G.R., 1994. Psychology of Teaching. 8th ed. Philadelphia: Saunders.
9. Safari, M., B. Yazdanpanah, H.R. Ghafaria and S.H. Yazdanpanah, 2006. (Comparing the effect of lecture and discussion methods on students: learning and satisfaction(. Iranian Journal of Medical Education, 6(1): 59-64. (Text in Persian).
10. Quistorff, B. and K. Aspegren, 2003. (The interactive lecture: a simple form of student – activating learning). Ugeskr Laeger 2003 Sepl., 165(36): 3400-3. (Text in Danish).
11. Pishgahi, A., S. Darehshiri and M. Oulia, 0000. The effects of active learning methods on student's satisfaction and information maintenance in students of Yazd University of Medical Sciences. (Text in Persian).
12. Amir, R., Z. Mohd Jelas and S. Rahman, 2011. Learning Styles of University Students: Implications for Teaching and Learning. World Applied Sciences Journal, 14(Special Issue of Innovation and Pedagogy for Diverse Learners): 22-26.
13. Rahman, S., *et al.*, 2011. Student Learning Style and Preferences for the Promotion of Metacognitive Development Activities in Science Class. World Applied Sciences Journal, 14(Special Issue of Innovation and Pedagogy for Diverse Learners): 11-16.